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AGRICULTURE AND ME



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The Teacher's Handbook
on the Agriculture
Industry.

GRADE 3



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A G R I C U L T U R E A N D M E

A Resource Book for Teachers

Division 1

By

Nadia Hochachka

Gabe Boulet, Consultant

Betty Gabert, Artist, Editor and Producer

ALBERTA AGRICULTURE

1987

INTRODUCTION TO THE TEACHERS

Mom: (After child's first day at school)
What's the matter?

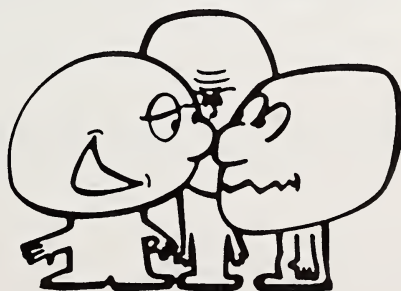
Child: Well it's not much fun. I can't read;
I can't write; and they won't let me talk!

- Author unknown

The above exchange reveals children's expectations that in school they will learn to read and write and that they will talk. Certainly in the activities of this handbook children are expected to read and write, and most of the activities accommodate and encourage talk as a means of exploring or sharing ideas about agriculture.

The need for this handbook stems from the fact that agriculture provides jobs to a significant number of Albertans and it provides essential products and services to all the rest of us, yet many of us are unaware of the scope and nature of the agriculture industry in our province. In addition many of us retain misconceptions about farming. This handbook is part of a response to these facts. Agriculture and Me is one of four handbooks which will subsume all four divisions grades 1 - 12. In turn these materials are part of an agriculture-in-the-classroom movement across the continent. The movement originates among farm people and others involved in agriculture whose aim is to help increase awareness about agriculture by providing resource materials for teachers.

Agriculture and Me is for those of you who teach in Division I. It suggests forty-six activities which you can use to help children increase their agricultural awareness. Our aim in preparing the handbook has been to suggest activities that will be fun for children and will encourage them to begin to develop up-to-date notions of what farming is; also to begin to recognize what else agriculture is, in addition to farming - the network of interrelated services and businesses that are associated with farming. Through the activities children have opportunities to discover the ways in which their lives and welfare are affected by agriculture.



While the focus of this handbook is on agriculture which relates to many social studies and science topics, we have selected activities with children's language development in mind. Our aim has been to suggest activities that allow for extensive use of language, both for learning and for sharing or communication. As well, we intend that the activities allow children to enjoy language and to develop increasing appreciation of and interest in it - attitudes critical to language development itself.

In many of the activities we have suggested group work. This takes into account the increasing amount of educational research that recognizes the essential role of social context in language development. Group work also allows the children to mobilize and refine their own knowledge through talk. Finally of course, group work allows the children to help each other and to develop attitudes of cooperation and acceptance so important in learning and living.

While we have related the units to the provincial curriculum guide for language arts, which offers separate objectives for grades 1, 2, and 3, the handbook is a flexible resource. You will be able to adapt many of the activities for use with children at any point of development in primary school. This adaptability is consistent with the philosophical framework within which you work; it acknowledges the need for continuity and articulation among various learning experience of young children. The adaptability also is consistent with the fact that you are in the unique position to know what is possible and desirable for your children and comfortable for you in your particular circumstances.

FORMAT OF THE HANDBOOK

Activity Outlines

The activities in this handbook have been grouped into nine units. The introduction to each unit offers a brief overview of the theme and general objectives for the group of activities in that unit. Individual activities have been written in a standard way and each one includes the following sections:

1. Activity Number - orders the activities which typically occur in groups of five and are presented by grade levels as follows:

2. The handbook is produced in 3 separate sections:

Section 1	Grade 1 - Activities 1 - 15
Section 2	Grade 2 - Activities 16 - 30
Section 3	Grade 3 - Activities 31 - 46

3. Title - suggests the purpose of the activity.

4. Study Question - a question to focus the activity; try to answer it before going ahead.

5. The Activity - a concise statement of what children do.

6. Curriculum Areas - a precise reference to curriculum statements found in your provincial curriculum guides for Language Arts, Social Studies, and Science.

7. Materials - a list of materials you will need for the activity.

8. Procedure - a brief description of suggested steps to follow in introducing, carrying out, and concluding the activity; marginal notations highlight the steps and reflect the curriculum areas.

9. Related Activities - additional activities that grow out of the main activity but may require additional resources as well as time.

Resource Sheets

Interspersed with the activity outlines are several types of materials that you may find helpful:

- pictures
- information sheets which provide some background for the activities
- samples of student activity sheets

Feel free to copy any of these. Some additional relevant materials can be obtained from the Department of Agriculture. Drop by or write to the following address:

Alberta Agriculture
Publications Office
7000 - 113 Street
Edmonton, Alberta
T6H 5T6

Some films also can be obtained from Alberta Agriculture. For information or to request a film catalogue write to the following address:

Film Library
Communications Division
Alberta Agriculture
7000 - 113 Street
Edmonton, Alberta
T6H 5T6

Glossary

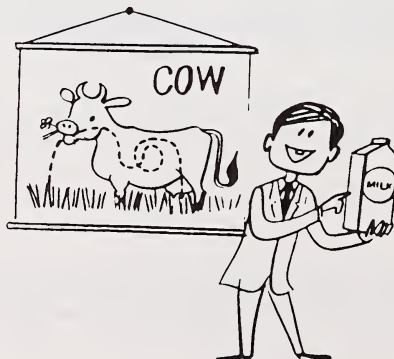
The glossary lists words by categories - e.g. farm plants, farm equipment. Words are alphabetized within each category. We have included some words which are fairly common so as to point out their uses in an agricultural context. The glossary is contained in Sections two and three.

Curriculum Chart

The curriculum chart shows which content areas of Social Studies and Science are emphasized in particular activities; also what types of language arts activities are involved. The wording of the curriculum guides is used in the activity outlines.

FINAL COMMENTS

The preparation of this handbook has been an enjoyable way of reinforcing our awareness of the central place of agriculture in the lives of all of us in Alberta. We hope that you find these activities useful and that you enjoy doing some of them with your students. We look forward to your comments and to your suggestions on ways we might improve this book.



ACKNOWLEDGEMENTS

In writing this handbook I have received help from a large number of people. Though space does not allow me to specify each person's contribution, I would like to at least mention the people whose support I have valued so much.

First I want to thank Warren Wismer and Betty Gabert for the opportunity to work on this project that I endorse so strongly. As well, I want to thank Dr. Grace Malicky of the University of Alberta who put me in touch with Alberta Agriculture and thereby initiated an association that has been very interesting and enlightening for me.

I want to thank Betty Gabert not only for bringing me into the project but also for being the best kind of editor I could imagine. She has understood my needs and responded to them directly and thoughtfully. She has given me suggestions and perceptive criticism, which reflect her very comprehensive understanding of our project and of the perspective of teachers in classrooms. And she has demonstrated faith in me. Her leadership and collegiality have made my work productive and very pleasurable.

Another colleague who has offered steady support is Gabe Boulet. I have appreciated his thorough responses to my questions about agriculture and I have enjoyed the many talks in which my questions led to fascinating explorations about agriculture. These discussions have fed both my writing and my enthusiasm.

I appreciate the staff I have worked with at Alberta Agriculture, especially Joyce Gingerich whose endless patience and good humor and her skill on the word processor have allowed me to move easily through a number of drafts on this handbook.

Several teachers have been generous enough to read parts of my drafts and to offer comments from a classroom perspective. That was essential and I have appreciated it very much.

While working on this handbook I visited a number of farms around Edmonton. I appreciate the generosity of the farm people who shared their time and their experiences with me. I also greatly appreciate the co-operation of a number of people in agriculture who arranged for or prepared material about life on various types of farms.

Finally I want to thank my friends and family members who have generously offered suggestions and information as well as continual encouragement. Their curiosity, their prompts, and their praise have helped make this project a tremendous delight for me!

N.H.
December, 1986



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CONTENTS

Introduction to Teachers	i.1
List of Resources	i.9
Curriculum Connections	i.11
UNIT 7 - RURAL FARMING COMMUNITIES	
31. How Many People Live on Farms?	31.0
32. Comparing a Town and a Shopping Centre	32.1
33. Interview: Focus on Rural Life	33.1
34. Letters Between Classes	34.1
35. A Box Social	35.1
UNIT 8 - INTERDEPENDENCE BETWEEN FARMERS AND OTHER GROUPS	
36. A Garbage Log	36.1
37. The Taste of Alberta	37.1
38. Making a Corn Dolly	38.1
39. Mapping Agricultural Products	39.1
40. It Takes a Lot of People to Produce Bread	40.1
UNIT 9 - FARMING TODAY	
41. The Old and the New: Developments in Agriculture	41.1
42. Grow a Snack	42.1
43. Running a Small Demonstration Farm	43.1
44. Reporters on the Agriculture Beat	44.1
45. Agricultural Trivia	45.1
46. Agriculture Parade	46.1
GLOSSARY.....	A 1



LIST OF RESOURCES

UNIT 7 - RURAL FARMING COMMUNITIES

Towns and Cities of Alberta (Population map)
Population Changes in Alberta (Information sheet)
Population Changes in Alberta (Graphs)
Population Changes in Alberta (Student graphs)
Main Street, Alberta (Charts of small towns)
Neighborhood Shopping Centres (Charts of small malls)
Checklist: Comparing Shopping Areas

UNIT 8 - INTERDEPENDENCE BETWEEN FARMERS AND OTHER GROUPS

Finding a Dump Site for Garbage (Information sheet)
Garbage Log
Product Rating Sheet
Summary Sheet: Product Ratings
Alberta Products Map
The Corn Dolly: A Precis
The Corn Goddess: A Precis
Making a Corn Dolly
Agricultural Products of Alberta
Producing Bread (Flow chart)
Twenty Questions: Sample Job Clues

UNIT 9 - FARMING TODAY

Developments in Farming (Information sheet)
The Old and the New (Student worksheet)
Data Sheet: Growing Snacks
Steps in Raising a Crop



CURRICULUM

CONNECTION

CURRICULUM CONNECTION: 3

Activity Number	Major Agricultural Concepts	Curriculum Connection: Social Studies	Curriculum Connection: Science
Unit 7 - Rural Farming Communities			
31	Urbanization	Interdependence of Communities.	
32	Rural community; urban community.	Interdependence of Communities.	
33	Rural; urban; farm life.	Lifestyles of Canadians in Other Times	
34	Farm life; rural life.		
35	Box social as a traditional rural custom.	Lifestyles of Canadians in Other Times.	
Unit 8 - Interdependence Between Farmers and Other Groups			
36	Agricultural product; conservation of land.	Interdependence of Communities.	Infer the con- sequences of man-made changes in the environ- ment.
37	Alberta farm product; food processing.	Interdependence of Communities.	

CURRICULUM CONNECTION: 3

<u>Language Arts Area</u>	<u>Curriculum</u>	<u>Activity</u>
Listen- ing & Viewing	Read- ing & Writing	Connection: Language Arts
Speak- ing & Viewing	Write- ing & Viewing	Title

Unit 7 - Rural Farming Communities

Read charts, maps, and graphs; write explanations.

How many People Live on Farms?

Read maps; write notes, charts, answers; interview people.

Comparing a Town and a Shopping Centre.

Write letters; interview people.

Interview; Focus on Rural life.

Write letters.

Letters Between Classes.

Write reflectively; express feelings; make comparisons.

A Box Social.

Unit 8 - Interdependence Between Farmers and Other Groups

Record observations ; write notes; read graphs; discuss observations.

A Garbage Log.

Write observations in a chart; report observations.

The Taste Of Alberta.

CURRICULUM CONNECTION: 3

Activity Number	Major Agricultural Concepts	Curriculum Connection: Social Studies	Curriculum Connection: Science
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38	Grain; grain farming; farming as a risky business.		
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39	Agricultural product; agricultural by-product; food processing.	Interdependence of Communities	
----	---	-----------------------------------	--

40	Food processing; agricultural job.		
----	---------------------------------------	--	--

Unit 9 - Farming Today

41	Change; equipment specialization	Lifestyles of Canadians In Other Times.	
----	-------------------------------------	---	--

42	Growth; intensive farming.		Observe and describe stages in growth of plants.
----	-------------------------------	--	---

43	Farming; demonstration farm; crop.		Observe and des- cribe changes in environment re- sulting from man's activities.
----	---------------------------------------	--	--

44	Agriculture.		Identify parts of an environment and infer their inter- dependence.
----	--------------	--	--

CURRICULUM CONNECTION: 3

Language Arts Area

Listen- Read- Speak- Write- Connection:
ing & ing & ing ing Language Arts
Viewing Viewing

Activity
Title

	Follow instructions; listen to stories; read maps; report and share ideas.	Making a Corn Dolly
	Read labels and maps; write list.	Mapping Agri- Agricultural Products.
	Read pictures; report and explain interpretations.	It Takes a Lot of People to Produce Bread.
Unit 9 - Farming Today		
	Read charts; identify details; make comparisons and inferences.	The Old and the New: Developments in Agriculture.
	Follow instructions; record observations in sequence; write stories.	Grow a Snack
	Observe events; discuss observations; write notes and paragraphs.	Running a Small Demonstration Farm.
	Write notes; listen to and read the media; report ideas and facts.	Reporters on the Agricultural Beat.

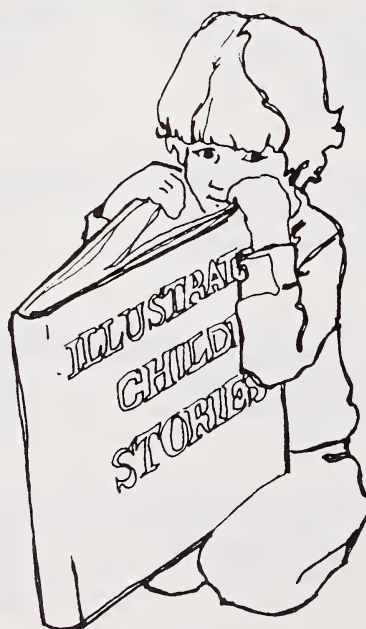
CURRICULUM CONNECTION: GRADE 3

Activity Number	Major Agricultural Concepts	Curriculum Connection: Social Studies	Curriculum Connection: Science
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45	Agriculture.	Lifestyles of Canadians in Other Times.	
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46*		Lifestyles of Canadians In Other Times.	
-----	--	---	--

* Could be a wrap-up for any grade level.



Language Arts Area	Curriculum	Activity
Listen- Read- Speak- Writ- ing & ing & ing ing	Connection: Language Arts	Title
Viewing Viewing	Read reference material; listen to media; write questions; classify information; discuss questions.	Agricultural Trivia
	Discuss ideas and feelings; write reflectively; write captions.	Agriculture Parade



Unit 7 - Rural Farming Communities

INTRODUCTION

In this unit our intent is to suggest activities that allow children to explore the rural context for farming, especially in contrast to the urban one. The children will have a chance to explore the ways in which a rural community reflects and supports the farming of that area. At the same time, we intend that children begin to recognize that farming is not synonymous with rural living - that while rural areas are to a large extent agricultural, the context for agricultural activity is both rural and urban. We intend that children begin to appreciate the extent to which rural communities have become more closely linked with urban areas where so much of the agricultural processing, and even some farming, are carried out.

The following questions provide a frame of reference for this unit:

1. What is a rural community? What do we mean when we identify a community as a rural one?
2. What are some of the ways in which farms have changed in rural communities?
3. What are some of the ways in which life has changed in rural communities?

OBJECTIVES

1. To explore how population changes in Alberta are related to changes in farming.
2. To recognize that small towns provide specific facilities suited to the agricultural needs of their surrounding areas.
3. To recognize some of the changes in farm life in rural communities.



Alberta
CANADA

POPULATION DISTRIBUTION

1981

CENTRES OVER 2 500

600 000

400 000

200 000

100 000

50 000

25 000

10 000

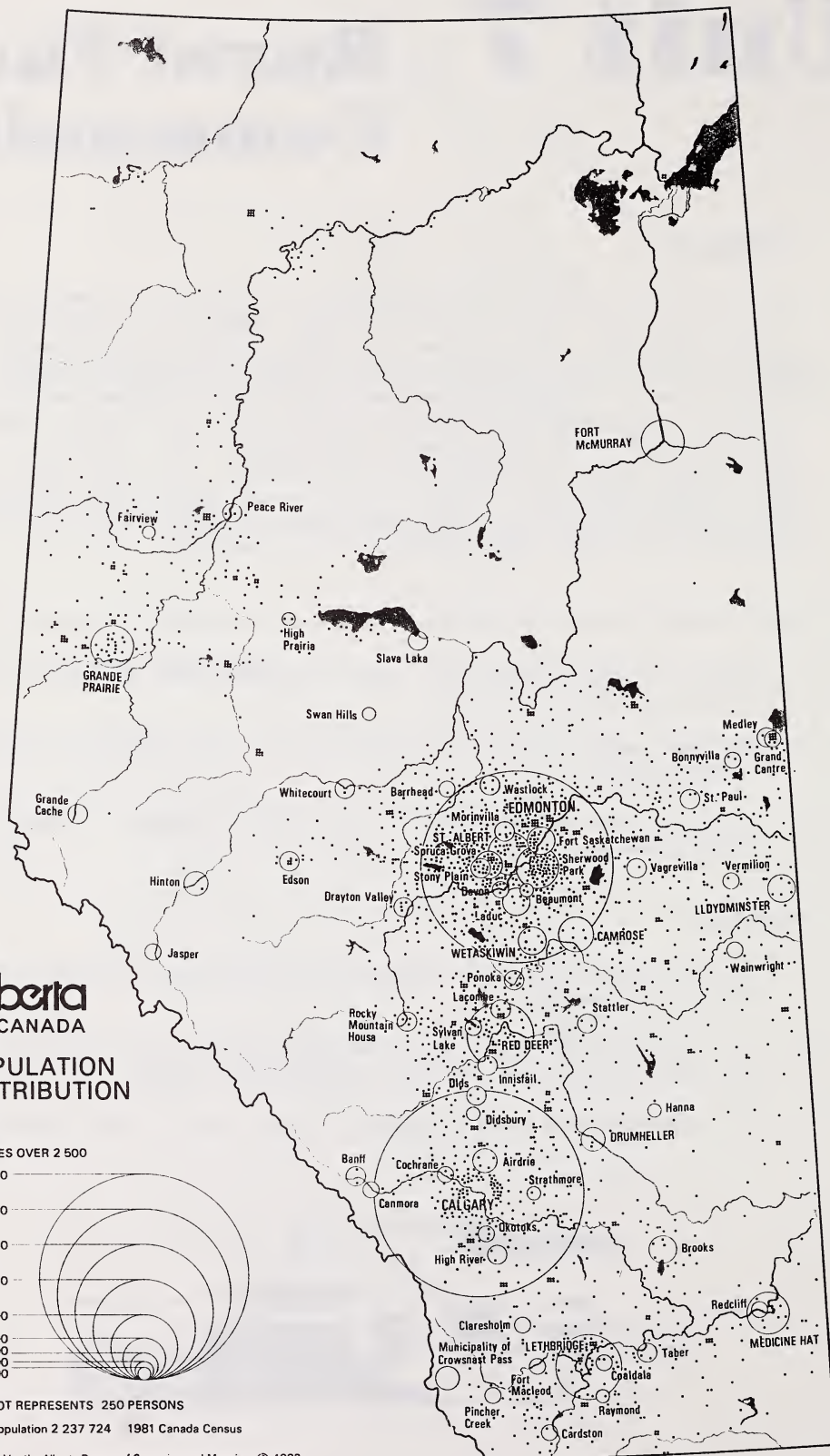
5 000

2 500

ONE DOT REPRESENTS 250 PERSONS

Total Population 2 237 724 1981 Canada Census

Produced by the Alberta Bureau of Surveying and Mapping © 1983



Activity 31

HOW MANY PEOPLE LIVE ON FARMS?

STUDY QUESTION

How has the population of your community changed in the last 50 years? Do you know how many farmers live there?

THE ACTIVITY

In this activity children make graphs of population changes in the rural and urban areas of the province.

CURRICULUM AREAS

Language Arts

Read a variety of materials and use appropriate form of written language: maps, graphs.

Social Studies

Lifestyle in other times and places: interdependence of communities in Canada today.

MATERIALS

- Map of Alberta showing concentration of population around major cities and towns.
- Statistics sheet on population changes in the rural and urban sectors.
- Outlines for pie charts.

PROCEDURE

Reading maps

Examine the population map of Alberta and have the children locate their own community on the map. Briefly discuss the concentration of population around towns and cities.

Graphing

Have the children make pie charts to show the relative numbers of people in rural settings and urban settings in 1921 and 1981.

Predicting/synthesizing

Have the children work in pairs or threes to briefly discuss their graphs. Ask each group to write a conclusion about the meaning of the results.

Conclusion

Compare the conclusions in a discussion of urbanization. Highlight the facts that fewer people remain on farms in rural areas and that their farms are in many cases larger and more specialized, making farming more demanding and risky and making farmers more dependent on others for products and specialized services.

RELATED ACTIVITY

Interview grandparents or seniors.

Population Changes in Alberta



		Rural and Urban Population of Alberta (Percents, rounded)					
		1921		1951		1981	
Rural	Farm	62		52	36	23	9
	Non-Farm				16		14
Urban		38		48		77	

Before 1951 rural and urban were defined in Canada by population. Urban was cities, towns, and villages over 5000. The definition was changed because incorporation laws varied across provinces. Then rural and urban were defined by population relative to area. The figures here are based on the following definitions of urban:

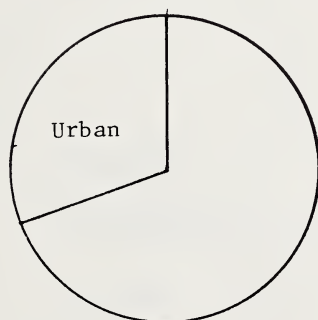
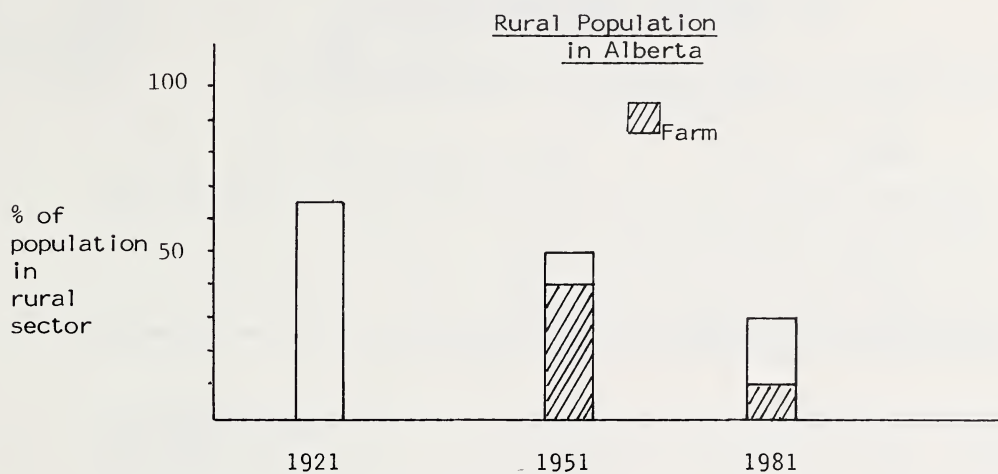
1921: People in incorporated cities, towns, and villages of 5000 or more.

1951: People in cities, towns, and villages of 1000 or more (incorporated or not) including metropolitan areas.

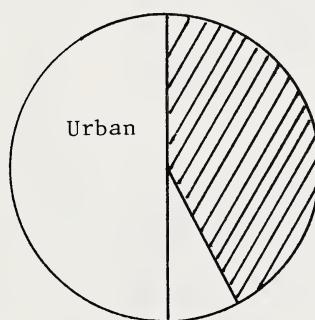
1981: People living in an area having a population of 1000 or more and a population density of at least 400 per sq. km.

Based on the 1925, 1955, and 1985 editions of the Canada Year Book.

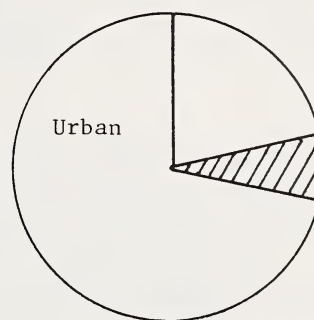
Population Changes in Alberta



1921



1951



1981

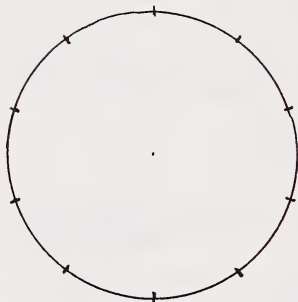


Population Changes in Alberta

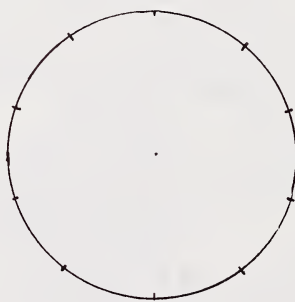


	Percent of people living in rural and urban Alberta		
	1921	1951	1981
Rural	62	52	23
Urban	38	48	77

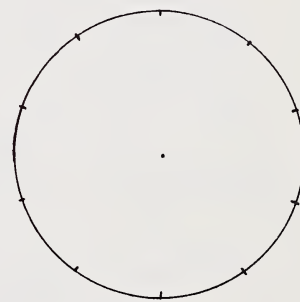
Use these numbers to make pie charts. Each pie chart below represents 100%, and each chart is marked off into 10 sections.



1921

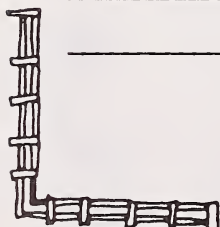


1951



1981

What do these charts show you? Write your conclusion here.



Activity 32

COMPARING A TOWN AND A SHOPPING CENTRE

STUDY QUESTION

How is a neighbourhood shopping centre in a city similar to the main street of a small town ?

THE ACTIVITY

In this activity children identify the kinds of services and facilities that are - and are not- available in their neighbourhood malls and in small towns in Alberta.
(Services: stores, mills, banks, clinics etc.; facilities: skating rinks, community halls etc.)

CURRICULUM AREAS

Language Arts

- Read a variety of materials: charts.
- Use appropriate written forms: simple notes.

Social Studies

- Lifestyles in other times and places: Interdependence of communities in Canada today.

MATERIALS

- Diagrams of neighborhood malls in a city.
- Simple maps of main streets in several small towns in Alberta.
- Checklist for comparing services found in the communities.

PROCEDURE

Preparation

Plan a visit to the neighbourhood shopping centre nearest your school or to the shopping area of your town. Prior to the visit, list several questions the children might ask the proprietors. Role-play likely interactions to practise appropriate ways to approach the business people.

Interviewing
Notemaking

Have the children take along note pads and walk in pairs. Have each pair enter one place of business and ask permission for a brief interview. Encourage them to make brief notes about the nature of the service offered by the business.

Reading charts

After the walk, have the children as a class create a diagram of the shopping area to show the places visited. Have each pair of children use the checklist of services to compare their own shopping area with that of one of the small towns shown on the chart "Main Street, Alberta." Have each pair briefly discuss together the two questions on the checklist and write answers to them.

Making inferences

Conclusion

Discuss the children's responses to the questions. Note the agricultural connections reflected in their shopping area. Note similarities between small town shopping areas and neighbourhood malls in a city, emphasizing that each provides services and facilities that are needed by the people in that area and possibly a few additional ones.

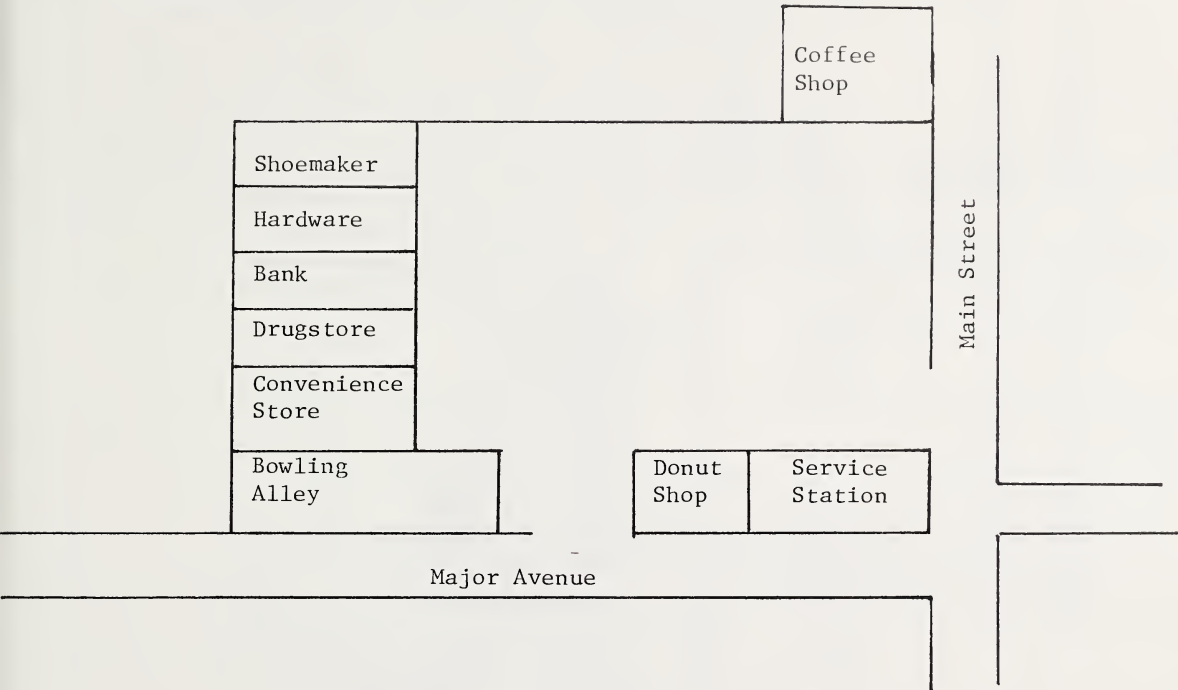
RELATED ACTIVITY

Have the children write paragraphs based on their responses to the questions on the checklist. Compile them in a class book about the way small towns support agriculture in their vicinities.

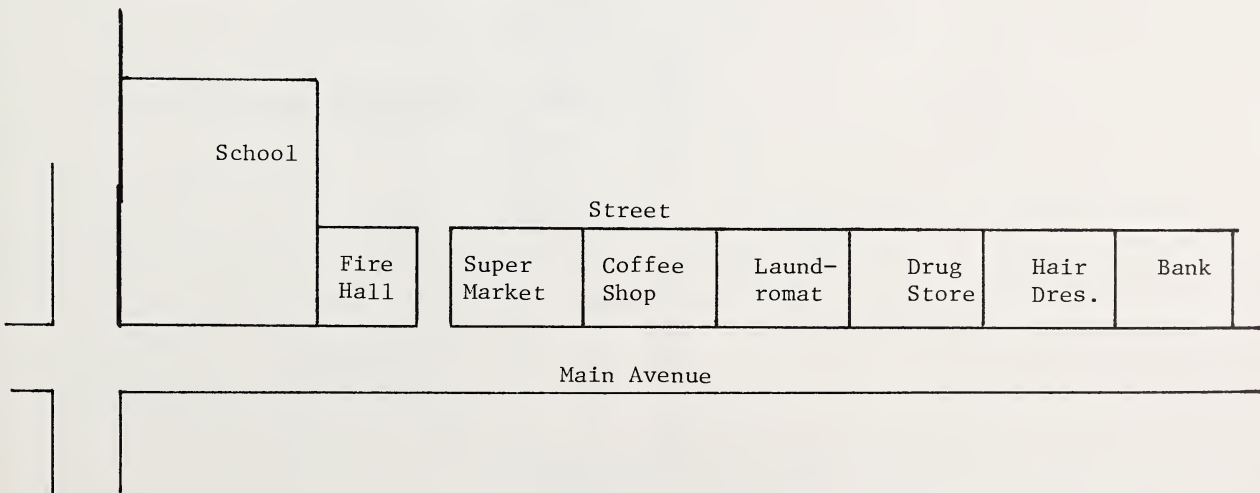


Neighborhood Shopping Centres

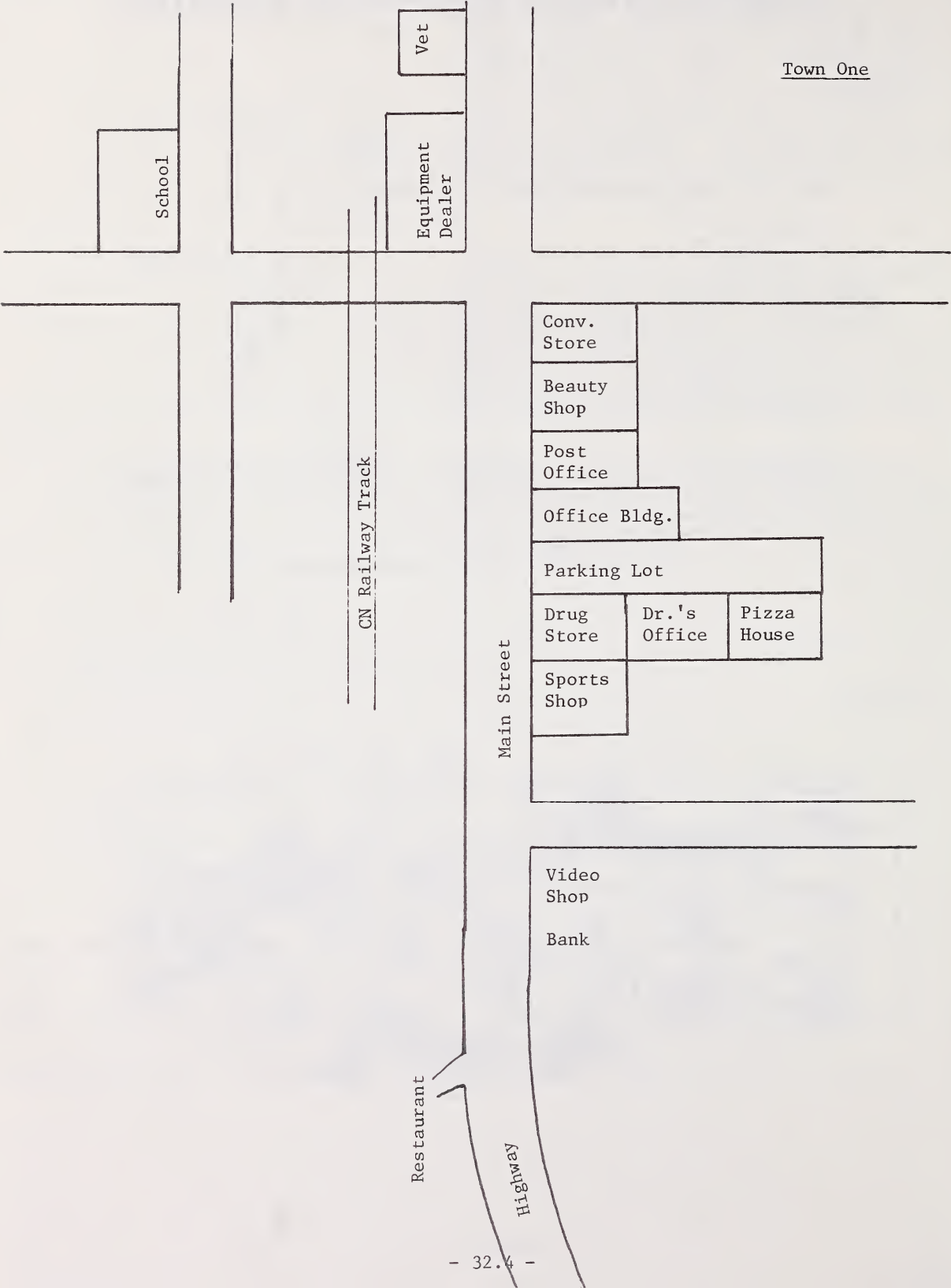
Mall One



Mall Two



Main Street, Alberta



Town One

Main Street, Alberta

Town Two

Grain Elevators

Creamery

Railroad

Railroad

Highway

Garage

Town
Hall

Cafe

Treasury
Branch

Garage

Houses

Hotel

Town
Office

Treasury
Branch

Fire
Hall

General
Store

Beauty
Salon

Store

Grocery
Store

Garage

Senior Citizens Recreation Centre

General
Store

Egg Grading
Station

Main Street

Equipment
Shop

↓
Roman Catholic Church
Greek Catholic Church
Greek Catholic Hall

Main Street, Alberta

Town Three

Highway

Main Street

Municipal
Office

Town
Office

Post
Office

Lumber
Company

Bank

Variety
Store

*

Co-op
Grocery

Beauty
Salon

Medical
Clinic

*

*

Grocery
Store

*

Cafe

Hotel

Library

Rest Room

Fire
Hall

Senior
Citizens' Centre

Restaurant

Drug
Store

Veterinarian

Beauty Salon

Laundromat

*

*

Automotive
Store

News-
Paper

Insurance
Company

Checklist:

Comparing Shopping Areas



Facilities	Your Shopping Area	Closest Town
1. Food store		
2. Hardware		
3. Drugstore		
4. Bank		
5. Elevator		
6. Mill		
7. Garage		
8.		
9.		

Questions:

1. Why do you think these services are in the shopping centre and in the town?

(Which of them are of use to you and your family?)

2. What kind of farming do you think is near this town (or these towns?)

Activity 33

INTERVIEW: FOCUS ON RURAL LIFE

STUDY QUESTION What would you like to know about farm life in a rural setting?

THE ACTIVITY

Note:

In this activity children explore the meanings of "rural" and "urban" by interviewing a guest in the class. If the school is in a rural area, the children could still explore details of rural farm life, with special emphasis on the role of the rural setting in the farmer's life.

CURRICULUM AREAS Language Arts

- Use appropriate forms of written language: questions; letters.
- Communicate orally: discussions, interviews.
- Proofread with increasing competence.

Social Studies

- Lifestyles of Canadians in other times.

MATERIALS

No special materials.

PROCEDURE

Discussion

Identify one or more persons who would be willing to come into the class to be interviewed about life on a farm in a rural setting and on ways the farmer depends on cities. Relatives or family friends of a child in the class or representatives of local agriculture and exhibition societies are possible contacts. Allow the children to work in groups for 5-15 minutes to discuss and write down some of the questions they would like to ask the guest(s).

Letter writing

Have the children use their questions as a basis for collaborating on a letter of invitation to the guest(s). Have the children proofread the letter and mail it.

Interviewing

Hold the interview. Have one of the children thank the speaker(s).

Conclusion

Have the children write definitions of "rural" and "urban". Compare their definitions with dictionary definitions and with the definitions of the Canada Yearbook (see activity 31). Relate the discussion to the notion of a continuum; emphasize the greater proportion of primary agricultural activity occurring in rural settings and the greater proportion of agricultural support activities occurring in urban settings.

rural	(setting)	urban
	(lifestyle)	:
		:
		suburban

RELATED ACTIVITY

Prepare dramatizations of particular aspects of rural life or of problems that rural children might face - e.g. long days because of bus travel to school, difficulties participating in after-school activities such as music lessons and sports activities.



Activity 34

LETTERS BETWEEN CLASSES

STUDY QUESTION

What do you imagine life is like for a child in a rural farming community (for a child in a city)?

THE ACTIVITY

In this activity children in a rural class exchange letters with children in an urban one.

CURRICULUM AREAS

Language Arts

- Use the appropriate forms of written language for clear communication: letters.
- Read a variety of materials: letters.
- Proofread with increasing competence.

MATERIALS

- No special materials.

PROCEDURE

Preparation

Arrange with a teacher in a rural (urban) school to have an exchange of letters; agree on which class will write first. Use the other teacher's class list and assign names to the children, or have each child sign up beside a name on the class list.

If the numbers are not equal, one or more children might be happy to write to two children; or have the whole class collaborate on a letter to the "extra" child or children; or have the children prepare a class newspaper for the other class, with contributions from each child.

Writing Letters

Examine both the features of friendly letters and the kinds of content that might be shared in this situation. Have the children write the letters and help each other proofread their envelopes, and if they wish their letters.

Conclusion

Allow the children to briefly reflect on the kinds of impressions that are being conveyed in their letters and the kinds of responses they anticipate. Put the letters in the mail all together. When answers are received, allow time for reading them; some children might wish to share theirs with the class. Encourage the children to carry on writing to their pen pals.

RELATED ACTIVITIES

1. Prior to the exchange of letters, have the children write simple autobiographies to send the other class for use in starting the letter exchange. The children might want to include small photographs in their autobiographies.
2. Have the children exchange letters with adults who know about rural life and farming and are interested in writing their own reflections to individual children. Perhaps a seniors' club would assist in launching such a project.



Activity 35

A BOX SOCIAL

STUDY QUESTION

Who will buy your lunch and share it with you?!

THE ACTIVITY

In this activity children have an old-fashioned box social.

CURRICULUM AREAS Language Arts

- Communicate orally using various forms: conversations.

Social Studies

- Lifestyles of Canadians in other times.

MATERIALS

- Boxed lunches prepared by the girls.
- Paper money for use by the boys.

PROCEDURES

Preparation

Briefly discuss the old custom of holding box socials when young women prepared lunches in fancy boxes for sharing with men who bought the lunches at an auction sale. Have the children make paper money for use in the auctioning of lunches.

The Box Social

Identify a date for having a box social and agree on guidelines for making and selling the lunches. Select and train a child to serve as an auctioneer, or invite a person from the community or from within the school to serve as an auctioneer. Hold the social.

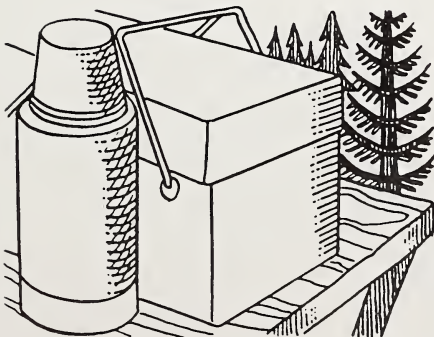
Conversations

Conclusion

After the box social, count the profits. Have the children reflect on the event and express their feelings and thoughts about it in their journals. Ask them to reflect on comparable modern customs.

RELATED ACTIVITIES

1. Have the children write stories or verses about social customs old and new. Share the writing in a series of literary "readings". Encourage the children to talk with relatives who have stories to share on this theme and to share their writing with the relatives.
2. Extend the event to the whole school. Make posters to advertise it and visit classes to invite people. Alternately, hold the event in the evening and write invitations to parents to share it.



Unit 8

- Interdependence Between Farmers And Other Groups

INTRODUCTION

The activities in this unit are intended as a means for children to recognize and explore some of the ways in which farmers and other Albertans depend on each other for products and services. We intend that children will recognize not only the complex web of interrelated jobs and businesses that surround farming but also the extent to which we as consumers, and as workers, are part of that web.

Underlying the activities of this unit are the following questions.

1. What are some of the products and by-products we get from the agriculture industry?
2. In what other ways do farmers and other Albertans depend on each other?
3. What kinds of businesses and jobs are related to farming in Alberta?

OBJECTIVES

1. To explore the relative number of our daily foods that are locally produced.
2. To identify where in Alberta some of our agricultural products and by-products are made.
3. To recognize that farming can be done in a city and that much of agricultural processing occurs in cities and towns.
4. To recognize the variety of interrelated jobs that make up agriculture in Alberta.



Activity 36

A GARBAGE LOG

STUDY QUESTION

How much garbage do you produce in a week?

THE ACTIVITY

The children log the amount of garbage produced day by day, especially from agricultural products.

CURRICULUM AREAS

Language Arts

- Use various forms of written language: notes, charts.
- Read a variety of materials: charts; graphs.
- Communicate orally: discussion.

Social Studies

- Interdependence of communities in Canada today.

Science

- Environment: Infer the consequences of man-made changes which occur in the environment; appreciate the importance of actively participating in the protection and improvement of the environment.

MATERIALS

- Log sheet for recording garbage produced daily.
- Information sheet on issues related with garbage disposal.
- Information sheet on soil grades.

PROCEDURE

Recording

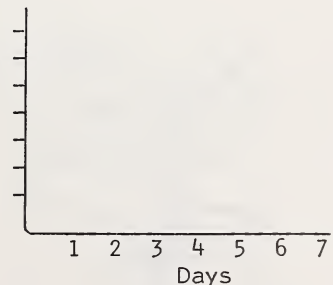
Ask the children to keep daily records of the amounts and kinds of garbage produced by their families in a week. Use a log sheet such as the one provided.

As a class compile the information from the garbage logs on a graph to show the total volume of garbage being produced day by day in one set of homes:

Synthesizing and

interpreting information

No.
of
bags



Discussion

Notemaking

Conclusion

Use the graph as a basis for discussing in groups what can and should be done with so much garbage - where it can be put, what it might be used for, who should decide. Have the groups make brief notes in preparation for reporting their ideas.

Share reports. As a class, list a few recommendations for the children to follow in their homes and perhaps in the school to prevent accumulation of unnecessary garbage and to dispose of garbage.

RELATED ACTIVITIES

1. Dramatize a community meeting on a proposal to place a city dump on good farmland near a small town just outside the city.

To prepare for the dramatizations, form groups of children, representing various farm families and members of the town council. Have each group prepare a joint statement for presenting at the meeting, identifying reasons for or against the dump site.

Hold the town meeting at which groups present and debate their positions.

Conclude the town meeting by forming a recommendation for the mayor of the town to use in negotiations with the city. Highlight issues related both to farm peoples lives and to environmental protection.

2. Debate other issues that are more current or more local but still relate to the interdependence of rural and urban communities.



Finding A Dump Site for Garbage



When a city looks for a spot for a garbage dump, the planners must protect people's safety and comfort as well as protecting the environment. Municipal and provincial governments and also private citizens must cooperate in an effort to find sites that are convenient for users and safe for the people in the surrounding areas.

Several of the most important items to be investigated and considered in the planning of a dump site are listed below:

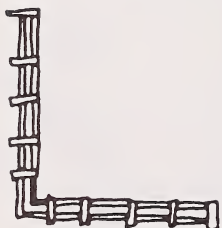
1. Toxic run-off from wastes. Garbage includes many toxic items - even common items such as the remains in a hair-spray container or left-over medicines. The toxic products can seep through the soil and find their way into people's wells and into rivers, streams, and lakes. Several factors associated with this problem include type of soil - sand, clay - as well as topography and distance from the dump site.
2. Uses of good soil. A second conservation issue relates to the use of good soil for purposes other than cultivation. Many cities are built on good soil and use up more and more of it as they increase in size. Because a dump site must be accessible, it can use up additional good soil near a city. Farmers who own land stand to lose income if they must give up productive land.
3. Traffic. When a new dump is introduced into a rural community, new traffic comes along too. This can increase levels of noise and air pollution and decrease road safety near the dump; it also decreases privacy for farmers in the immediate vicinity.
4. Odors. Some odors may be associated with garbage even if it is treated or buried. These odors may be accentuated by certain weather conditions, and increased traffic may contribute to this problem for residents close by.
5. Loose Paper. Inevitably a certain amount of paper and rubbish escapes from the site of a garbage dump and is blown around by the wind. This can be both unpleasant to farmers in the area and inconvenient, since they have to clean up errant items.

Based on telephone communication with employees of the City of Edmonton.
Oct. 1986.

Garbage Log



KITCHEN GARBAGE PRODUCED			
DAY	Number of fresh or cooked food items.	Number of food wrappers or containers.	Number of bags of kitchen garbage.
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			
Totals			



Activity 37

THE TASTE OF ALBERTA

STUDY QUESTION

Can you discriminate an Alberta product from others?

THE ACTIVITY

In this activity children taste groups of selected products to assess differences between them.

This activity is recommended for fall when some students might supply products from their own gardens, for comparing with products from other places such as California or B.C.

CURRICULUM AREAS Language Arts

- Read and listen to a variety of materials: directions; labels.
- Use appropriate forms of written language for clear communication: labels; charts.

Social Studies

- Interdependence of communities in Canada today.

MATERIALS

- Samples of food items grown or processed both in Alberta and in other places.
- Product rating sheets.
- Summary sheets
- Paper cups.

PROCEDURE

Collecting food samples

Identify several types of food to examine in a comparison of local products with similar products made outside of Alberta - e.g. cheeses, honeys or jams, carrots. Have the children form groups around each product, and ask members of each group to bring both Alberta-made and non-Alberta made samples of their product.

Have each group mark several sets of paper cups with letters that correspond to particular food samples.

- a. Ontario cheddar
- b. B.C. cheddar
- c. Alberta cheddar

Tasting Evaluating	In each group of cups, include at least one Alberta product. Have the children in each group taste the food samples presented by the other groups and fill out rating sheets for them.
Recording	<p>Have each group count the number of times their Alberta product was rated each way:</p> <ul style="list-style-type: none"> - most preferred (yum) - O.K. - least preferred (yuck) <p>Have them do the same for the other samples and have them record their results on their summary sheets.</p>
Conclusion	Share results across groups, noting any patterns of responses that may seem evident. Emphasize the fact that food processing companies do use such consumer surveys in developing their products - another aspect of the interdependence between producers and consumers.

RELATED ACTIVITY

Create a display of Alberta food products for your school for a day. For the display, prepare "Think Alberta" posters about selected products. Alternately, seek permission from a local food store or supermarket to display such posters on their premises for a week, focusing on particular Alberta products available for sale there.



Recommended Resource:
 Directory of Alberta
 Agricultural Processing
 Industry - Alberta Agriculture

Write to:
 Agricultural Processing
 Development Branch
 7000 - 113 Street
 Edmonton, Alberta
 T6H 5T6

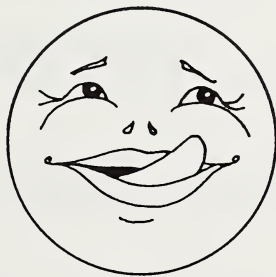
Product Rating Sheet



Product: _____



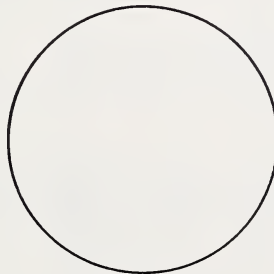
Please rate the three samples of this product on the scale below.
Place the letters a, b, and c in the blanks to show how you liked each one.



--	--	--

1

(Yum)



--	--	--

2

O.K.

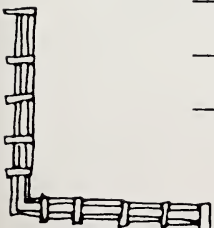


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3

Yuck

Please add a comment if you wish: _____



Summary Sheet:



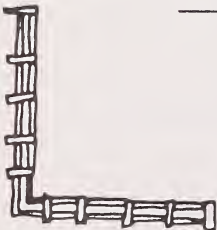
Product Rating

Summarize the ratings for your products below:

Type of product: _____

	No. of ratings YUM	No. of ratings O.K.	No. of ratings YUCK
Product A (Alberta)			
Product B ()			
Product C ()			

Summary of Comments: _____



Activity 38

MAKING A CORN DOLLY

STUDY QUESTION Do you know where wheat is grown in Alberta?

THE ACTIVITY

The children will make corn dollies (dolls made of wheat) and identify regions of the province where wheat is produced.

Note

"The Corn Dolly" is an English fairy tale about a straw doll made of wheat stalks. In England the word "corn" is commonly used in reference to wheat. Precs of this story and another one, "The Corn Goddess", are included.

CURRICULUM AREAS

Language Arts

Read and listen to a variety of materials: stories; instructions; maps.

MATERIALS

- Map of Alberta products.
- Wheat stalks - about a dozen for each child.
- Thread and scissors.
- Instructions for making a corn dolly.
- Precs of two stories about corn dollies.

PROCEDURE

Reading and Discussing

Share one or both of the stories about the corn dolly, pointing out the regional use of "corn".

Making dolls

Have the children work in pairs or groups to create their corn dollies.

Conclusion

Allow time for showing the dollies and, on the products map of Alberta, identify their homes - the areas where wheat is produced. Trace the routes they travel to get to your community.

RELATED ACTIVITIES

1. Make other plant crafts - e.g. straw men or scarecrows, whisk brooms, wall hangings made of dried plants.
2. Invite a storyteller into class, e.g. a senior citizen who can tell about craftwork related to farm products - spinning wool and weaving; tanning animal hides and making leather items.

The Corn Dolly: A Precie



The story takes place a long time ago when farmers cut their wheat with scythes. A farmer was cutting his wheat when he heard a little cry farther down the field. As the farmer came close to the end of his field the crying got louder and louder. Before finishing his last stand of wheat the farmer poked his head into the stalks and there it was - a little sobbing creature made of wheat stalks.

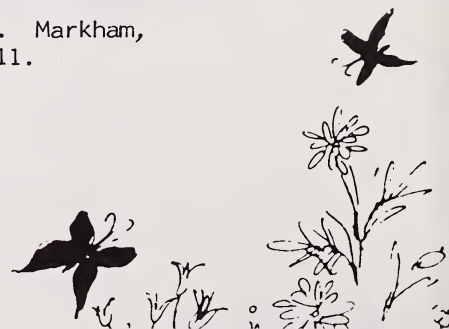
The farmer and the creature exchanged glances and talked with each other. The farmer asked what was the matter and the dolly said it was that farmers didn't care about them but came every year and cut down the wheat leaving the dollies homeless.

The farmer protested, saying that in the winter the wheat would wither away, but the dolly just cried harder. So the farmer promised to find it a home. First he took the dolly to the barn where he thought it would be warm and safe. But the dolly accused the farmer of thinking that just because it was small and made of straw it wasn't good enough for a proper house.

The farmer said it wasn't so. He took the dolly into his house and put it on the kitchen windowsill. But the dolly protested and cried again and again. Trying to please it, the farmer moved it to a hard chair between him and his wife, then to a soft chair, and finally next to the fire where he and his wife sat and kept warm.

Just then a spark flew out of the fire and landed on the corn dolly. Since it was made of straw, it burst into flame and was gone before the farmer could do anything about it.

Based on "The Corn Dolly", in Terry Jones, Fairy Tales. Markham, Ontario: Penguin Books Canada, Ltd., 1983, pg. 9 - 11.



The Corn Goddess: A Precis



The story takes place a long time ago when farmers cut their wheat with scythes and sickles. Herman went to the fields with his parents during harvest and helped his mother stand the sheaves of wheat in bunches to dry in the sunshine.

Thorn was the Lord of the Harvest and directed the men in their work. They worked long days. At mid-day they sat on the hedge to eat their bread and cheese, and again at tea-time they stopped for food and drink then worked until sunset.

The harvest went on for over a month. Finally only a narrow stand of wheat was left. Thorn came over and everyone stopped work. Thorn knelt on one knee over the last stalks of wheat and cut them very gently. Then the harvesters cheered and shouted; they tossed their hats up and hugged each other.

Thorn took the precious stalks and sat down under a big oak to weave them. When Herman crept up to watch him, Thorn told Herman that it was the Corn Goddess. He'd woven the stalks into the shape of a lady with a long skirt. Ears of wheat made her hair and her hands and he was weaving a little straw basket to be carried on her arm.

Thorn told Herman that all year the people worked hard in the fields - ploughing, seeding, weeding, chasing away crows and keeping farm animals out of the fields. But the wheat needed sunlight and rain and there had to be life in the seed and the farmers could do nothing about that. They had to trust the Corn Goddess who lived in the soil and caused the wheat to grow. She was in those last stalks of grain and Thorn was weaving them into the shape of a goddess so that the people could see her and thank her for their harvest.

When all the sheaves of wheat were dry they were carried back to the village and stored in the great barn. The people made a procession. Thorn marched at the head carrying the straw Corn Goddess.

In the evening there was a Harvest Feast with the Corn Goddess at the head of the table. When the feast was over, Thorn put her in his house on the mantel over the hearth. She stayed there till after Christmas. When the days began to get longer the people had another wonderful feast. Then they marched to the fields to begin work for the next harvest.

Thorn ploughed the first furrow and gently laid the Goddess in it. The people knelt and prayed for another good harvest. Then Thorn turned another furrow and buried the Goddess in the good earth where she could again help the seed to grow.

People have carried on the art of straw weaving. The figures are called Corn Dollies.

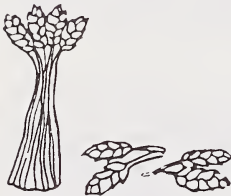
Based on "The Corn Goddess" by Ralph Whitlock, in Farms. London: Macdonald & Co. (Publishers) Ltd. 1977, ph. 32-33.

Making A Corn Dolly



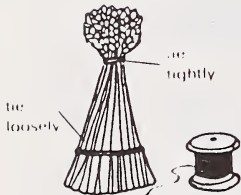
Materials you need:

- Bunches of wheat stalk (or wild grass)
- Scissors
- Thread



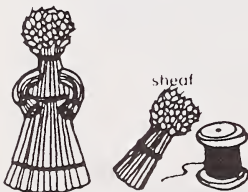
1. Arrange stalks with ears for doll's head.

Save small pieces.



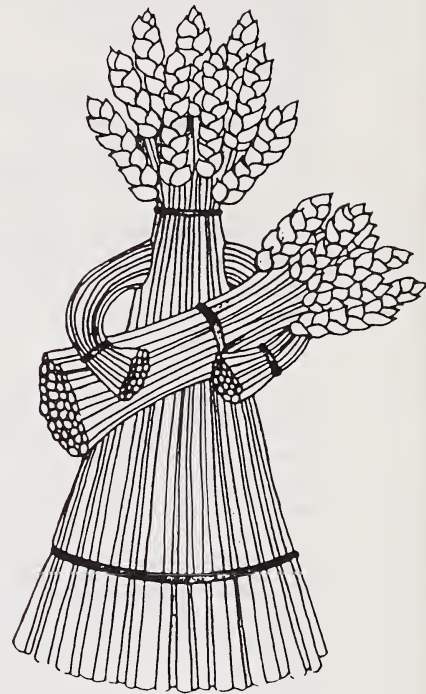
2. Tie stalks tightly below ears.

Tie them loosely near bottom.

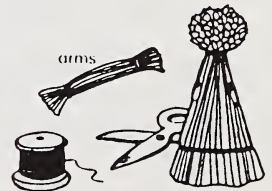


4. Bend arms around and tie waist below armholes.

Tie small bunch of stalks to make sheaf.



3. Tie ends of a small group of stalks. Push them through body for arms.



5. Put sheaf in arms and stuff skirt with odd ends or with light paper.

From Farms. London: Macdonald & Co. (Publishers) Ltd., 1977, pg. 35.

Activity 39

MAPPING AGRICULTURAL PRODUCTS

STUDY QUESTION

Where is your milk produced? Your eggs?
Your cereal? Your woolen blanket or
socks?

THE ACTIVITY

The children will show on a map of Alberta the origin of agricultural products in their homes.

CURRICULUM AREAS Language Arts

- Read a variety of materials: labels; maps.
- Use writing in a variety of forms: lists.

Social Studies

- Interdependence of communities in Canada today.

MATERIALS

- Map of Alberta showing major cities and towns.
- Information sheet on Alberta agricultural products and by-products.

PROCEDURE

Discuss the variety of retail sources of food -e.g. bakery, deli, market, supermarket, meat shop, convenience store. List some the children know of. Tell the children they will be searching at home for agricultural products and by-products coming from Alberta farms and processors to these varied retail outlets and then to their homes.

Reading labels

Ask the children to examine food products and agricultural by-products in their homes and to list those which are made in Alberta. Share these lists and consolidate them in one list on the board.

Listing

Mapping

Make a large map of Alberta. Have the children place markers on the map to show where their products come from.

Conclusion

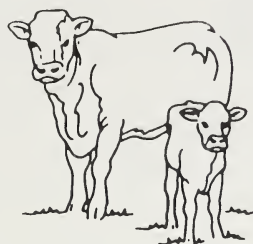
Review the variety of communities from which products come to our homes. Note that many agricultural products come from cities - from urban farms such as greenhouses and market gardens or from processing companies such as dairies, cheese companies, and potato processors (chips etc). Note also that because farmers specialize, they buy many of their groceries just as city people do.

RELATED ACTIVITY

1. If any child has relatives involved in farming, or if the school is in a farming area, it may be possible to invite a member of a farm family to talk to the class about the business of selling farm goods to processors and retailers.
- 2.. Have the children extend the lists of agricultural products and by-products given on the information sheet.



Agricultural Products of Alberta



milk
ice cream
butter
cheeses
yogurt
powdered milk
Big Mac
beef steak
canned meat sauce



blankets
sweaters
rugs
lining for gloves
insulin
lamb chops

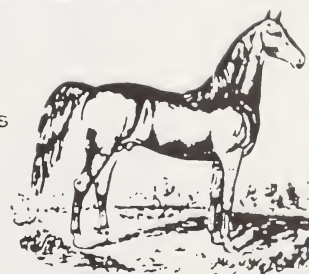


honey
wax
pharmaceutical



bacon
ham
canned lunch meat
pig skin gloves
football

paint brushes
cosmetic brushes
leather goods
animal food
export meats
glue



down jacket
feather pillows
meat



flour
frozen dough
noodles
spaghetti
bran flakes
frozen pizza
animal feed

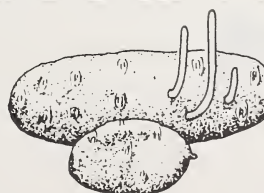


Kentucky fried
bouillon cubes
eggs
liverpaste

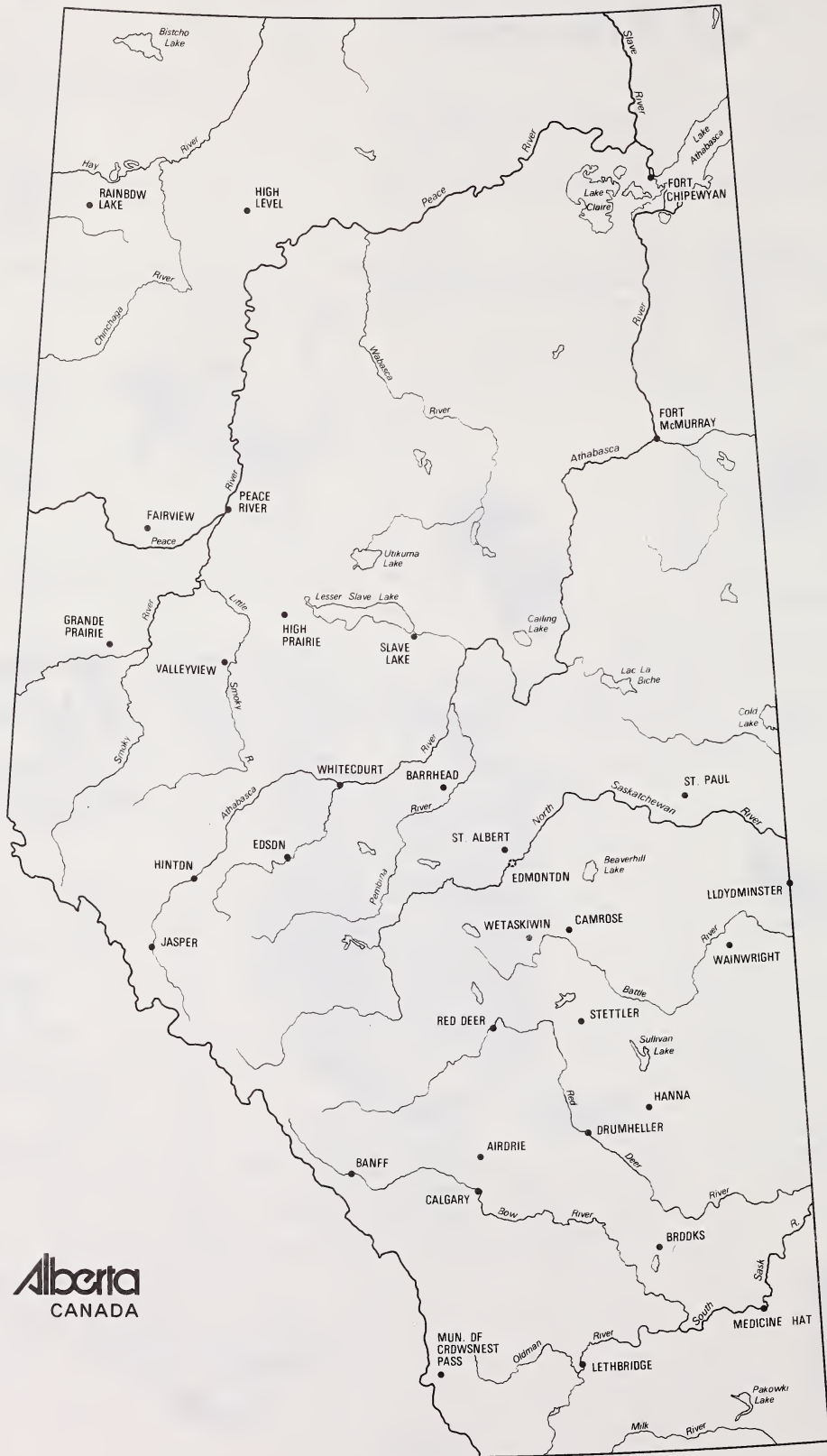
vegetable oil
corn chips
cornflakes
popping corn
frozen corn



canned juices
fresh tomatoes
canned tomato soup
tomato sauce
spaghetti sauce



packaged
mashed potatoes
(potato powder)
potato chips



Activity 40

IT TAKES A LOT OF PEOPLE TO PRODUCE BREAD

STUDY QUESTION

Who are all the people that help make the bread I buy in the bakery?

THE ACTIVITY

The children identify a variety of interrelated jobs associated with the production of bread.

CURRICULUM AREAS

Language Arts

- Read a variety of materials: pictures.
- Communicate orally: reports.

Social Studies

- Interdependence of communities in Canada today.

MATERIALS

- Picture sheets about bread making.
- Sample of job and clues for Twenty Questions.

PROCEDURE

Making inferences

Distribute copies of the picture sheet on the production of bread. Have the children work with partners to identify the workers in each picture and to write down their guesses.

Reporting

Have each pair report on one of the pictures; briefly discuss each picture, noting the basis for the children's decisions about the workers in the pictures.

Conclusion

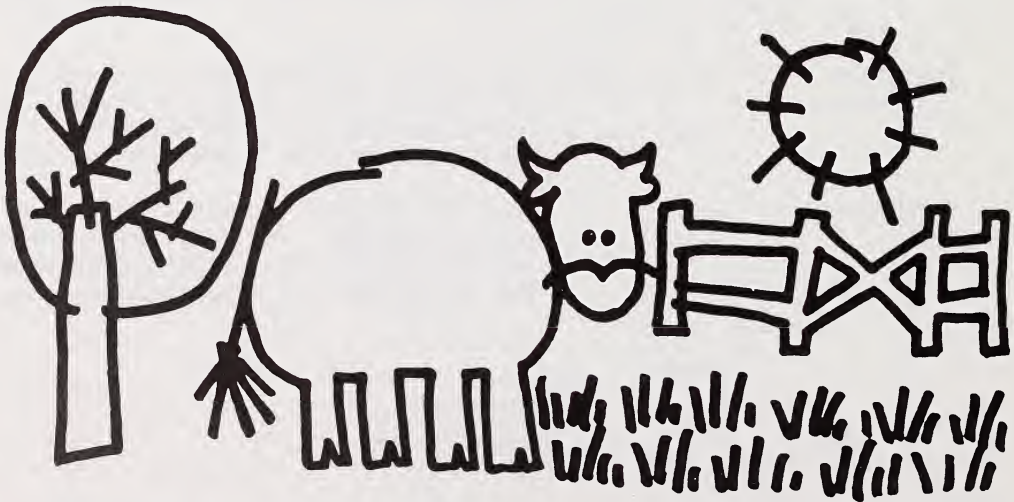
Have the children prepare a large flow chart on bread making. Review it and summarize, emphasizing the interrelationships among the workers and the importance of each.

RELATED ACTIVITY

Play a version of Twenty Questions in which children select and research particular jobs so as to be able to answer questions about them. Have the children write 4 or 5 clues about their particular jobs and the services or products each provides (see sample on information sheet). Have the subject state his or her clues at the beginning of each round.

Have each child select a monitor to keep track of YES and NO answers on the board. A child who guesses correctly gets 2 points. If a job is not guessed in 20 questions the subject gets 2 points. *

* Based on "Name That Job" and "What's My Line?", in Farm and Agricultural Resource Manual by Nancy Huppertz. Corvallis, Oregon: Oregon Women for Agriculture, 1982, P. 40.

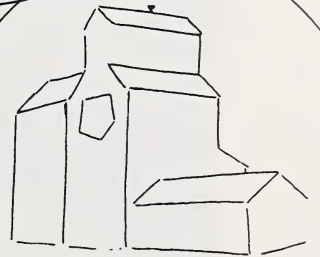
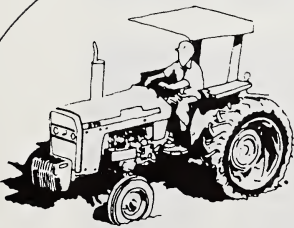
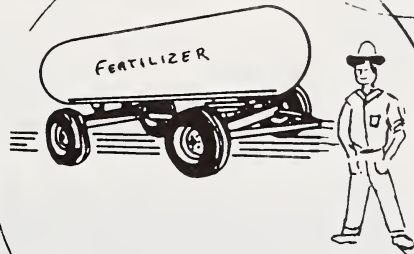
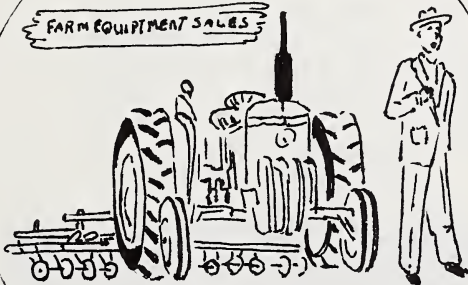


Producing Bread

These people help to produce your bread. Who are they?
Choose your answers from the list of occupations below
and write them under each picture.



Fertilizer agent
Railroad worker
Farmer
Baker
Machinery dealer
Grocery store cashier
Elevator worker



Twenty Questions:

Sample Job Clues

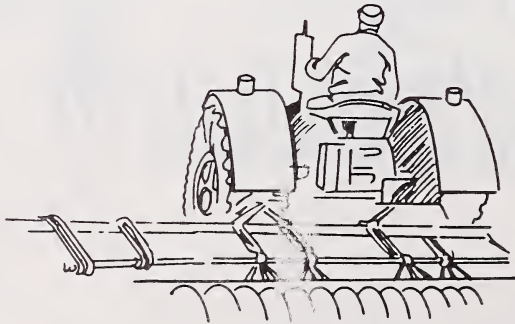


Supermarket Clerk

1. Works in a building.
2. Surrounded by lots of agricultural products.
3. Works with money.
4. Stands all the time at work.
5. Works across a counter from customers.

Beekeeper

1. Works outdoors.
2. Requires very little space.
3. Sometimes has to wear a net over head to protect himself.
4. Works with hundreds of little animals.
5. Product is sweet.



Unit 9- Farming Today

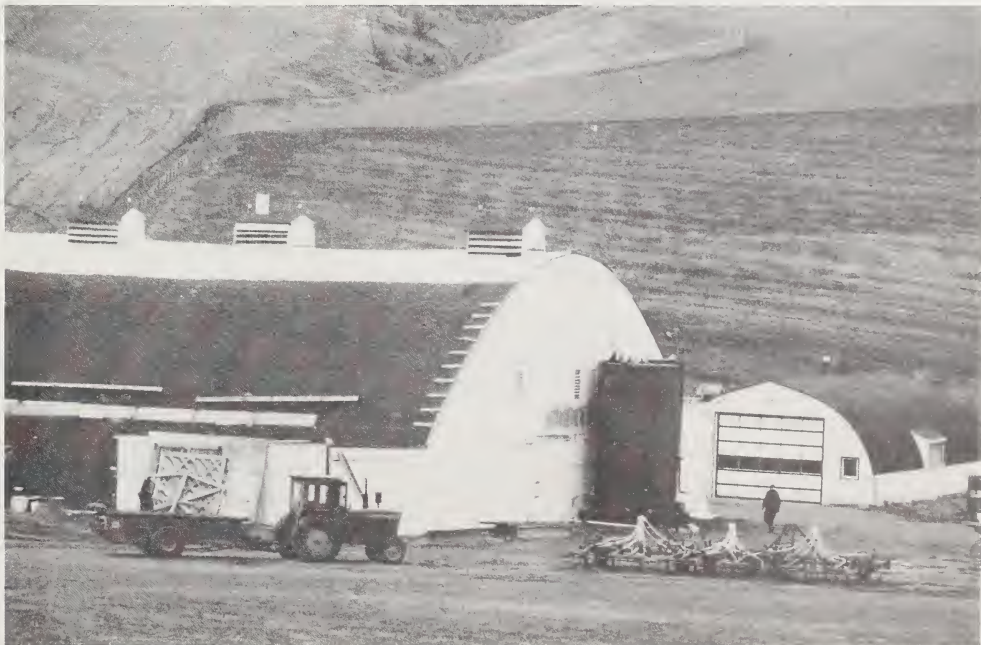
INTRODUCTION

This unit highlights the theme that underlies all of the activities in this handbook: that agriculture affects every one of us. In all the activities suggested for this unit the focus will be on modern aspects of agriculture. We expect that through these activities children will increase their appreciation of the diversification and specialization in the agriculture industry resulting from improvements in equipment and procedures. We also expect that children will begin to recognize the extensive amount of specialized knowledge and management ability associated with farming.

The most general question underlying the unit is this: What are some of the new ways in which farming and other aspects of agriculture operate today?

OBJECTIVES

1. To recognize the importance of good management and specialized knowledge in farming.
2. To appreciate the interdependence and the rewards of co-operating with others in a long-term undertaking.
3. To identify some of the developments in agriculture.
4. To appreciate the extent and some of the ways in which agriculture touches our daily lives.



Activity 41

THE OLD AND THE NEW: DEVELOPMENTS IN AGRICULTURE

STUDY QUESTION Can you name one new development in agriculture during the past 50 years?

THE ACTIVITY

Children explore developments in agriculture by matching old and new farm equipment and procedures.

CURRICULUM AREAS

Language Arts

- Read various materials: lists.
- Communicate orally: discussions.

Social Studies

- Lifestyles of Canadians in Other Times.

MATERIALS

- Information sheet on developments in agriculture.
- Worksheet comparing old and new items in agriculture.

PROCEDURE

Comparing

Do the matching worksheet as a class, noting the specialized developments in farming. List additional pairs if possible.

Conclusion

Briefly discuss each of the changes, especially their effects on farming and on farm people. Emphasize both the benefits and the demands of specialization and change.

RELATED ACTIVITIES

1. Have the children in small groups prepare dramatizations of scenes that reflect some of the effects the developments might have had on farm people. Perform the dramatizations, allowing time for children's questions and responses.
2. Have the children prepare a large timeline to show the sequence of these developments in agriculture.

Recommended Reading:

men, machines and land

- Farm and Industrial Equipment Institute. Chicago, Illinois.

The Old and The New

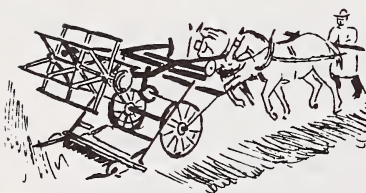
Developments in agriculture have generally been gradual and steady, one change leading to another, or at least making another possible. The evolution of grain cutting implements and practices is one example of such an evolution and is illustrated here.



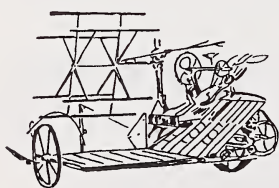
The early farmer cut grain manually with a sickle. Then he gathered it into bundles and stood it in stooks to dry. Stooks were gathered when the grain was dry and taken to the threshing floor.



A larger blade and a longer handle on the cutting tool allowed the farmer to cut a larger swath of grain in one sweep. As well, the addition of a cradle to this scythe allowed the farmer to cut bundles of grain, not just individual stalks. These would be hand-tied and stooked to allow for field drying before threshing.



Mechanization of the cutting knife (reciprocating knife) and addition of a "cradle reel" resulted in a reaper that speeded up the cutting and saved energy for the farmer.



The need to bundle the cut grain encouraged the refinement of the reaper to incorporate a binding capacity. The binder eliminated the labor required to tie grain bundles by hand and thus made stooking faster and easier.



Today grain is no longer bundled and stooked. Ripe grain can be cut and threshed by a combine which gathers the seeds into its huge hopper and leaves the straw on the field where it can be plowed under.

This kind of threshing is made possible not only by the development of the combine, which can both cut and thresh, but also by the development of new varieties of grain that are hardy enough to resist the forces of wind and rain and remain standing until they are ripe.

The Old and The New

The two columns below list different ways of doing the same job. Draw a line to connect each item in column 1 with its matching item in column 2.



Scythe

Tractor & Loader

Hand Rake

Combine

Flail

Milking Machine

Hand Milking

**Conveyor From
Chicken Cages**

Hand Churn

Tractor & Rake

Fork

Electric Churn

Collecting Eggs

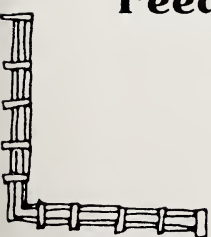
Swather

Broody Hen

Conveyor Belt Feeder

Feeding in Barn Yard

Incubator



Activity 42

GROW A SNACK

STUDY QUESTION What kind of farming can you do in a city?

THE ACTIVITY

The children grow alfalfa sprouts or mushrooms as a basis for exploring the nature of intensive farming.

CURRICULUM AREAS Language Arts

- Read a variety of materials: instructions.
- Use writing in various forms: notes, paragraphs.

Science

- Plants and Animals: Observe, measure, describe and record stages in growth of plants; describe proper care of plants; develop a positive attitude about the importance of providing necessary care for living things.

MATERIALS

- Alfalfa seeds and sprouter (or a kit for growing mushrooms).
- Child's data sheet for growing a snack.
- Information sheet on intensive farming.
- Snack food (bread or crackers, dip).

PROCEDURE

Introduce the notion of intensive farming by listing examples on the board - greenhouse farming, market gardening, poultry farming etc. Ask the children to compare the space required by one of these with the space required for grain farming. Emphasize that with the help of specialized equipment these small farms can operate at very high levels of efficiency - one greenhouse for example can supply a number of supermarkets.

Observing Recording

Have groups of children raise snacks. Have them keep simple records in notebooks or on data sheets such as the one provided.

Synthesizing Writing

Have the children use their notes to write up "The Story of a Mushroom" or "The Story of an Alfalfa Sprout."

Conclusion

Share the stories over snacks! Relate the activity to intensive farming, noting that an item as specific as mushrooms can be the basis for a commercial operation. Emphasize the role of technology in allowing for fast and efficient growth of plants and animals under very carefully controlled conditions.

RELATED ACTIVITY

Visit a hatchery, a feedlot, or a greenhouse. Have the children use their observations to write cartoons about hatchery chicks, fattened cows, or rosy winter tomatoes. Share the cartoons.



Intensive Farming



Definition

Intensive farming is a term used to refer to a concentrated farming operation. Usually space is relatively small, and specialized equipment and procedures are used to streamline and sometimes speed up production.

The farmer generally relies extensively on suppliers for materials and equipment required in the operation.

The operator may choose to employ intensive farming methods when land is very expensive or at a premium. Thus many intensive operations are located close to urban centers.

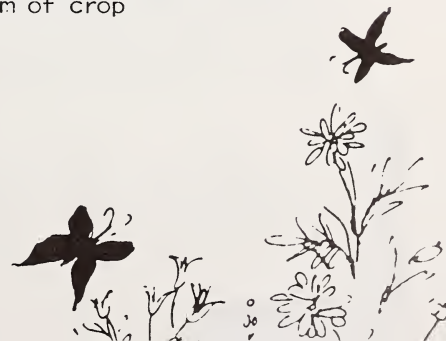
Examples

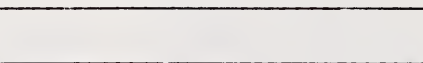
Dairying is an example of a type of farming that may be carried on in an intensive manner, though is not always done in this way. In either case, the cash product is milk. However, in an intensive operation, the farmer may not raise the grain and hay to feed his cattle but may buy it from other farmers or suppliers.

Because the confined animals do not have the opportunity to regulate their own feeding as range animals do, herd management is of critical importance to the animals' health and productivity. The farmer relies on specialists such as veterinarians when necessary. He also pays careful attention to the animals' diet; special additives may be required to supplement feed rations, thus providing a balanced diet.

The farmer uses specialized equipment not only in milking but also in regulating the supply of feed to the cows. Mechanization in chores such as cleaning the barn and the milking parlor also increases the farmer's efficiency.

Other examples of intensive farming are market gardening, greenhouse farming, hog raising, feedlots, and broiler and egg production. In fact, most farming operations are adaptable to intensive production to varying degrees; irrigated cropping is an intensive form of crop production.







Activity 43

RUNNING A SMALL DEMONSTRATION FARM

STUDY QUESTION What can you do to help your plants grow?

THE ACTIVITY

In this activity children establish and maintain small plots in their school yard. (Recommended for May/June).

CURRICULUM AREAS

Language Arts

- Communicate orally: conversations.
- Read a variety of materials: reports.
- Use appropriate forms of written language: notes.

Science

Environment: Observe, identify, and describe those changes in the environment that have resulted from man's activities; appreciate the importance of actively participating in the protection and improvement of the environment.

MATERIALS:

- Seeds or bedding plants (Lettuce, radish, bean, and spinach seeds grow quickly.)
- Gardening equipment.
- Small plots in or near the school yard or inside the classroom.
- Fertilizer.
- Information sheet on growing crops.

PROCEDURE

Organization

Seek permission to fence off a small part of the school yard for the children to use. Alternatively, obtain access to a small amount of land near the school or set up a plot inside the classroom. Form groups of 4-5 children who will work together on single plots.

Preparation

Briefly discuss the meaning of "farming" - producing goods for sale - in contrast to demonstration farming or hobby farming, which have non-commercial purposes. As a class, decide on the type of farming to demonstrate in the project - grains, vegetables, flowers - and have each group select a particular kind of plant.

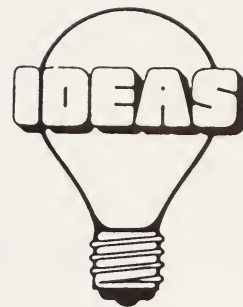
Review the information sheet on growing crops, noting how each step relates to the class project. Focus on ways of helping the crops grow - e.g. fertilizing, watering, weeding.

Developing guidelines	Develop a timeline for the project, including regular meeting times. Establish simple guidelines for the project.
Caring for and observing plants	Have the children run their model farms and keep brief notes of their observations. Hold regular short meetings at which the groups can share observations and raise questions. At each meeting focus on a particular aspect of farm practice.
Conclusion	At an identified time, harvest the crops, if appropriate. Hold a final meeting when each group reports and the children draw on their experience to identify a number of principles of good farm practice. - practices they found useful. Have the children put these together in a concise poster or illustrated manual on caring for crops.

RELATED ACTIVITIES

1. As an alternative to farming separate plots, have the children serve as gardening groups, each spending a specified amount of time helping to maintain the school grounds. They still can report back to the class, and at the end of term they can report to parents and school staff and make recommendations for the summer maintenance of the school grounds.
2. As an alternative to having each group tend a plot throughout the project, divide the project into stages - e.g. preparing the soil, seeding, regular watering and weeding, hoeing, harvesting (if appropriate). Have the groups take responsibility for separate parts of the project. Relate the organization to the notion of specialization, pointing out the greater amount of time made possible for perfecting one part of a farming operation as well as the greater need for co-operation among farmers.
3. Explore the possible meanings of "close to the land". Reflect on sensory characteristics of earth e.g. (aroma of watered soil, feel of it on hands) and on the pleasure of being responsible for a job. Have the children write in their journals and talk together then create thoughtful poems to reflect their understandings of the phrase "close to the land".

Steps in Raising a Crop



SELECT
SEED

PREPARE
SEED BED

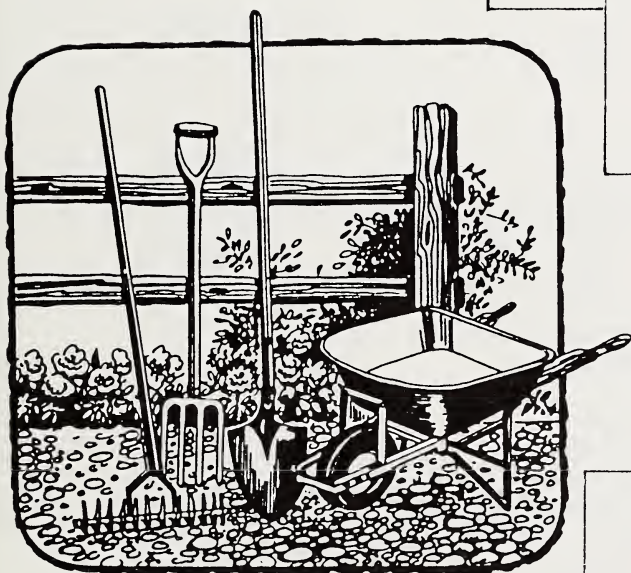
FERTILIZE

PLANT
SEEDS

CONTROL WEEDS
AND INSECTS

IRRIGATE

HARVEST



Activity 44

REPORTERS ON THE AGRICULTURE BEAT

STUDY QUESTION What have you heard or seen today that concerns agriculture and you?

THE ACTIVITY

Children will report and post daily news that relates to agriculture.

CURRICULUM AREAS

Language Arts

- Use appropriate forms of written language: notes.
- Communicate orally: reports.

Science

- Environment: Identify various parts of an environment and begin to infer their interdependence.

MATERIALS

- A flip chart, flannel board or portable felt-pen board.

PROCEDURE

Observing
Notemaking

For a number of weeks have the children maintain a news board where they write brief messages about events or experiences that they can relate to agriculture. Encourage them to use symbols or simple illustrations to help convey their messages. Rotate reporting among the children, assigning different groups to each week.

Discussion
Synthesizing

Once a week have a brief press conference when a particular group is interviewed by the rest of the class about the highlights of the week's news. Have the groups keep scrapbooks or notebooks of their news events.

Conclusion

At an identified time, conclude the project with a discussion in which the children summarize the kinds of news they've shared, listing the categories and reflecting on their significance.

RELATED ACTIVITIES

1. If a local newspaper or a radio or T.V. station has a reporter or commentator who covers agriculture, that person may agree to appear at the children's summing-up session to share a few stories about reporting agricultural news. The reporter may report the event in turn!
2. Instead of a general news board, have the children maintain a daily weather board that not only displays interesting facts about weather conditions but also indicates their implications for farming. This activity would be appropriate in September/October or in May/June when the weather is critical to farming.
3. Have the children write feature stories about personalities in agriculture. Encourage them to interview relatives who have farmed or who work in an agricultural support area - e.g. a supermarket, a research station, an implement dealership. Compile the stories in a class newspaper. Sell copies in the school or simply share them with the children's families.
4. Use the news items as a source of words for work on word families and word structure.



Activity 45

AGRICULTURAL TRIVIA

STUDY QUESTION How many points can you earn in a game of Agricultural Trivia?

THE ACTIVITY

The children prepare questions for a game about agricultural trivia.

CURRICULUM AREAS

Language Arts

- Read a variety of materials: glossary; reference books.
- Use appropriate forms of written language for clear communication: questions.
- Communicate orally: instructions; conversations.

Social Studies

- Lifestyles of Canadians in other times.

MATERIALS

- Glossary.
- Books about farms and farming.
- Small cards.

PROCEDURE

If some of the children have watched their parents play the game Trivial Pursuit or have played it themselves, use that game as a basis for establishing a framework for their own game.

Writing questions

Form groups and have each group prepare 5-10 questions for one of several categories of information related to agriculture. The glossary of this handbook could serve as a source of both categories and information. Encourage the children also to use the library and the news media as sources of fascinating facts about agriculture.

Making questions cards

Have the children write their questions on small cards and the answers to the questions on the backs of the cards. Have them use colors to code the cards, showing the category of information each card belongs to.

Developing rules

Make several copies of the cards so that several sets of children could play at once. Establish a scoring system - e.g. 2 points for each correct answer, largest number of points wins. Also establish classroom guidelines for playing - e.g. number of people who play together, whether people play individually or with partners as teams, times for playing, and place for storing the game.

Conclusion

At some point have a tournament so as to involve the whole class with the game. Have the children decide how to acknowledge the winning person or team.

RELATED ACTIVITY

Have the children prepare an illustrated volume of fascinating facts about agriculture. Display the volume in the school library with an appropriate sign of explanation.



Activity 46

AGRICULTURE PARADE

STUDY QUESTION What's the most interesting thing you've learned about agriculture?

THE ACTIVITY

Children visit one or more classes in their school to share their discoveries and insights about agriculture. (Recommended for Agriculture Week in March.)

CURRICULUM AREAS

Language Arts

- Use appropriate forms of written language: journals; inscriptions.
- Communicate orally: discussion.

Social Studies

- Lifestyles of Canadians in other times.

MATERIALS

- Large pieces of cardboard and sticks for making placards.

PROCEDURE

Reflecting

To focus attention on the primary place of agriculture in our province, examine a copy of the Alberta coat-of-arms and briefly note how it signals the importance of agriculture in Alberta. Have the children write freely in their journals for 10 minutes reflecting on how agriculture is of importance to them. Have the children share some of their reflections and identify common themes about "Agriculture and Me".

Preparing placards

Have the children use these ideas as a basis for preparing placards that present particular messages about agriculture. Arrange for a parade through another class to show the placards. Encourage the children to incorporate interesting facts into creative titles or inscriptions to emphasize their messages about agriculture.

The parade

Plan the parade. Decide on the order and manner of walking. Decide how to begin and end the parade - e.g. a large coat-of-arms leading; at the end a choral statement about agriculture.

Conclusion

Display the placards in the school under a heading such as "Agriculture Awareness at _____ School."

RELATED ACTIVITY

Include the whole school in an agriculture awareness day. Plan a variety of events such as displays of art and written work, readings, dramatizations, a farmer's market or a bake sale with signs about agricultural products used, and guest speakers. Include evening events and invite parents and others in the community. Prepare posters and simple brochures to advertise the event, and invite a reporter to cover the event. Afterwards, hold a short debriefing session to informally evaluate the event and to share any news items that appeared about it.



GLOSSARY

The words in this glossary are presented in categories which are related to the activities in the handbook. The explanations of the terms are not intended to be comprehensive definitions; instead our goal is to emphasize agricultural usage and especially to highlight the way the terms are used in this handbook.

Animals

- animal - a living being - e.g. dog, horse, hog.
- bee - an insect which collects nectar and produces honey. Bees are housed in hives and farmers collect the honey.
- broiler - a chicken or turkey raised for meat; killed at less than half mature weight.
- brood hen - a chicken that is used to keep eggs warm for hatching.
- calf - a baby cow or bull.
- cattle - more than one cow.
- chick - a baby chicken.
- cow - female bovine (cattle); some used for milk and some for meat.
- goat - a small animal used for milk, meat and in some cases wool.
- goose - a long-necked water bird; feathers used for stuffing in pillows, quilts, jackets.
- hatch - the emerging of the baby chick from the incubated egg.
- herd - a large group of cattle or goats.
- hooves - hard horny feet on some animals - horses, cattle, goats, sheep.
- horn - hard bony projection from the head of an animal.
- horse - an animal which is used for riding or farm work; farm work includes stock handling and in the past pulling loads (draft).
- kid - a young goat.

- lamb - a baby sheep.
- oxen - cattle used for draft purposes in pioneer days.
- pet - an animal kept for the pleasure of its owner.
- piglet - a baby pig.
- poultry - term used for farm birds - includes chickens, turkeys, ducks and geese.
- sheep dog - a working dog used to control and herd sheep.
- stock - animals kept on the farm for production purposes.

Buildings or Areas

- barn - a building used to shelter animals. This is usually totally enclosed.
- bin - a storage building for grain or feed.
- corral - a fenced-in area for animals.
- dairy - a farm where cows or goats are kept for the production of milk.
- elevator - a building or terminal where farmers bring their grain for storage - or where grain is elevated and transferred to an alternate mode of transportation: truck to rail; rail to ship.
- farm - an establishment or plot of land where food products are grown.
- farmstead - area that includes the human dwelling and other buildings which are often a part of a farm.
- farmer's market - a place where farmers or producers sell their products directly to the consumer.
- hatchery - a building that has specialized equipment for incubating and hatching poultry eggs.
- milk parlor - a place separate from the barn where cows are milked.

mixed farm	- a farm which produces a variety of products for sale - e.g. grain and hogs.
modern farm	- a farm which uses contemporary techniques and equipment in its operation.
pasture	- an area of grassy land where farm animals range and feed.
pen	- a stall for an animal.
shelter	- a building or other structure which is used to protect animals from weather; animals usually go in and out on their own.
silo	- storage building or pit in which green hay or high-moisture grains are fermented and stored as animal feed.
supermarket	- a place where food produce and other items are on sale to consumers.

Equipment

baler	- a machine used to compact and package roughage such as hay or straw.
equipment	- material or apparatus used in farm production and operation - e.g. machines, gas tanks.
grain auger	- a machine used to move or elevate grain from one place to another - e.g. from a truck to a bin.
incubator	- an apparatus used to keep eggs warm while hatching.
machine	- a mechanical apparatus used to assist the farmer with his work.
mechanization	- the use of machines to replace hand labour.
sheep shears	- clippers, usually electric, used to cut the wool from the sheep.
tractor	- a machine used to pull implements and do other work on the farm - most common farm machine.

- milking machine - an apparatus which attaches to a cow's udder and sucks the milk into a holding tank.
- combine - a machine which moves down the grain field separating the seeds from the stems of ripe plants.
- tillage - the operation of stirring, turning (plowing) or firming the soil to kill weeds or to prepare a seedbed.

General Terms

- agricultural - anything having to do with farming (raising crops or livestock for food or fibre) or the agriculture industry which includes marketing, processing, and trade in these products.
- commercial - an enterprise designed to generate income.
- environment - the immediate surroundings of a plant or animal which influence its well-being.
- exhibit - an article, plant or animal which is placed on display.
- fair - a gathering where exhibits are displayed and judged.
- rural - a place or person or thing which is related to the country or sparsely populated area.
- seasons - the natural times of the calendar year when weather changes affect the growing of plants and the behaviour of animals.
- soil - earth - the top layer of the ground which supports the growth of plants.
- urban - refers to city, town or densely populated areas in contrast to rural.
- weather - the changing climatic conditions such as rain, sun, and temperature that affect agricultural production.
- yield - the quantity of crop produced usually per unit area.

People

- auctioneer - a person who solicits bids for and conducts a public sale of farm animals or equipment.
- baker -- a person who uses the products of farm plants, especially grains and oils, to produce bakery products for sale to retail or wholesale outlets and to consumers directly.
- clerk - a person who works in a food store, bank, office or any setting where products or services are exchanged.
- consumer - a person who buys things for his own use - usually items that he can't produce for himself.
- farmer - a person who operates a farm.
- inspector - a person from a marketing agency or the government who evaluates a farming operation or product according to standard guidelines.
- judge - a person who evaluates and scores or rates exhibits.
- trucker - a person who transports animals or farm produce by truck to market, between farms, or to other destinations.
- veterinarian - a person who takes care of the medical needs of animals.

Plants

- barley - a grain used primarily for animal feed; also used for making beer.
- canola - a pod crop whose seeds are used for making cooking oil.
- cereal - refers to crops grown for grain - e.g. oats, barley, wheat, rye, corn; also a processed form of breakfast food.
- chaff - the empty pods or scale-like seed covers which are separated from the grain in a threshing and cleaning operation.
- chop - ground grain used for animal feed.

cleaned seed	- seed which has been screened to remove weed seeds and chaff.
crop	- plants grown for sale.
ear	- the entire head of corn including the cob, husk, and silks.
fruit	- the mature seed-bearing product of a plant - e.g. apple.
garden	- a plot of land used to raise food-producing plants or for esthetic purposes - e.g. rose garden.
germination	- the point at which a dormant seed begins to sprout forming a new plant.
graded seeds	- seeds evaluated and tested for size and condition and rated from good to poor.
grain	- the edible seeds from grassy-like plants such as wheat, barley, oats, rye.
grass	- a narrow-leaved plant which we grow on lawns and is used for pasture or grazing material for animals.
harvest	- a time for collecting the produce from plants and animals on a farm.
head	- the portion of a plant which contains the seed - as in grain or grass.
kernels	- the individual seeds from stalks of grain.
legumes	- a group of plants that have large pods containing seeds that split when they are ripe; used for food and forage - e.g. peas.
moisture	- (for germination) - the water required by a seed to sprout and later to sustain life.
oats	- a grain used primarily for animal feed; some used for cereal.
plant	- a living organism that usually has no locomotion; has roots, cellulose cell walls, and has capacity for indefinite growth.
pod	- the container for seeds on a legume plant.

ripening	- the process of maturing in plants resulting in seeds that are fully developed and can be used to grow new plants.
rye	- a grain crop used for bread flour and to a large extent for animal feed.
seed	- the reproductive portion of a plant. Many seeds are used for animal and human food.
sprout	- the earliest emergence from a seed as it begins to germinate or grow.
stalk	- the straw or stem-like part of the plant that supports the seed head.
stem	- the stalk of a plant.
temperature	- a factor in the germination and growth of seeds. Most seeds have minimum temperature requirements for germination and growth.
vegetable	- a plant usually grown in a garden for human food - e.g. potato and carrot.
weed	- a plant growing in a place where it is not wanted by man.

Process or Procedure

care	- providing the necessities for a living thing - e.g. animals; food, water, and shelter.
food processing	- operations which are done to prepare food for storage or sale - e.g. canning, freezing.
growth	- the development and maturing of a plant or animal.
harvesting	- the collecting of produce from a crop.
irrigation	- providing extra water to growing crops in a dry area.
inoculation	- using a needle to give an animal or plant a substance to prevent or cure disease; also introduction of selected strains of nitrogen-fixing bacteria into legume seeds.

- production - the process of raising plants or animals and preparing them or their by-products for sale.
- spraying - sprinkling plants evenly with a mixture of chemicals and water intended to feed plants or prevent the development of weeds or insects.
- stages - identifiable steps or degrees of development of plants or animals - e.g. seedling, growing plant, flowering plant.
- swathing - cutting grain and leaving it to lie in rows on the stubble to dry.
- threshing - the process of removing the seeds of a plant from the stalk and the shell or chaff.
- weed control - the elimination of unwanted vegetation from a crop thus reducing the competition for nutrients and water.

Products

- bread - a food baked from wheat and/or other grains and used most commonly for sandwiches or toast.
- by-product - a substance which is used in addition to the main product - e.g. glue is made from animal hooves.
- cheese - substance made from milk solids.
- egg - rounded hard-shelled body which can be used for reproduction or consumed as food; comes from poultry.
- flour - cracked or powdered grain used in baking.
- fresh - produce which has not undergone processing, such as freezing or canning, to change its form.
- honey - a sweet liquid made in the hive by bees.
- milk - a white liquid produced by a mammal to feed its young. We drink milk of cows or goats.
- product - something produced through growth or labour - e.g. meat from animals; vegetables; flour; tomato sauce.
- wool - the hairy coat on a sheep or goat used in the manufacture of garments. This is cut off each year.

N.L.C. - B.N.C.



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